

Solving physically nonlinear equilibrium problems for sandwich plates with a transversally soft core

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Abstract

© 2015, Pleiades Publishing, Ltd. A generalized statement of the problem of determining the stress-strain state of sandwich plates with a transversally soft core in the presence of constraints is proposed. Its correctness is discussed. The generalized problem is stated as the problem of finding a saddle point of some functional. The existence and uniqueness of a solution is proved. An iterative method for solving the problem is proposed and its convergence is studied.

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Keywords

existence theorem, iterative method, saddle point, sandwich plate, transversally soft core, uniqueness theorem